

Valuation on MEMS pressure sensors and device applications

ABSTRACT

The MEMS pressure sensor has been introduced and presented in this paper. The types of pressure sensor and its theory of operation are also included. The latest MEMS technology, the fabrication processes of pressure sensor are explored and discussed. Besides, various device applications of pressure sensor such as tire pressure-monitoring system, diesel particulate filter and others are explained. Due to further miniaturization of the device nowadays, the pressure sensor with nanotechnology (NEMS) is also reviewed. The NEMS pressure sensor is expected to have better performance as well as lower in its cost. It has gained an excellent popularity in many applications.

Keyword: Pressure sensor; Diaphragm; MEMS; Automotive application; Biomedical application; NEMS